

Restoration of Historic Granite Mileposts on the Northern Railroad Line



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The Northern Railroad, constructed in 1847-48, extends 70 miles from Concord, NH to White River Junction, VT. [See the attached map.] It was acquired by the Boston & Maine Railroad in 1887. The last scheduled passenger train on this line was in January 1965, and the last freight train was in May 1982. In 1992 the use of this right-of-way was abandoned and the tracks were removed for their scrap-iron value. The state of New Hampshire then purchased ownership of most of this line and now operates it as a recreational rail trail.

Around 1901 the B&M Railroad installed granite mileposts along their railroad lines, and many remain in place to this day. They are impressive dressed-granite posts, one foot square, standing 4 to 5 feet above ground, and weighing approximately 1,400 pounds.

On the Northern Line, one side of the post is painted with a “B” and the mileage to Boston, and the other with “WRJ” and the mileage to White River Junction. Originally they were positioned giving distances from Concord, NH, the southern terminus of the Northern Line. But some time around 1920 when the B&M absorbed the Northern Line into its total network, it repositioned these mileposts and repainted them to give distances from Boston. Some posts still show vestiges of the earlier “C” indication.

Unfortunately, with the demise of active use of the most of line, many of these mileposts were removed by private parties. Of the original 69 mileposts along the Northern Line, only 39 remain in place. Their locations are documented in Appendix A.

In Grafton County almost all of the mileposts disappeared. Only 5 of the original 28 remain – three in Lebanon, one in Canaan and one in Grafton. As a result of widespread publicity, one milepost was located in private hands and was restored to its original position in Lebanon. The NH Dept. of Transportation provided 14 original mileposts removed from a decommissioned rail line in upstate NH. These were repositioned at missing sites. Seven missing mileposts were replaced with metal signs. One missing milepost at the Mascoma River bridge in Lebanon remains unmarked.

Merrimack County was more fortunate – 33 of the original 41 remain. Danbury, Wilmot and Andover have retained all of theirs. Franklin lost one, Boscawen lost 6 and Concord lost one. Two posts located on private property were returned to their original locations. The NH Dept. of Transportation provided an additional 3 original posts that were installed at missing locations. Two missing mileposts have been replaced with metal signs. One missing milepost at the Contoocook Bridge in Concord remains unmarked. We continue to seek out the original posts that remain missing. Whenever original mileposts are discovered - such as the two discovered along US Rte. 3 just north of the

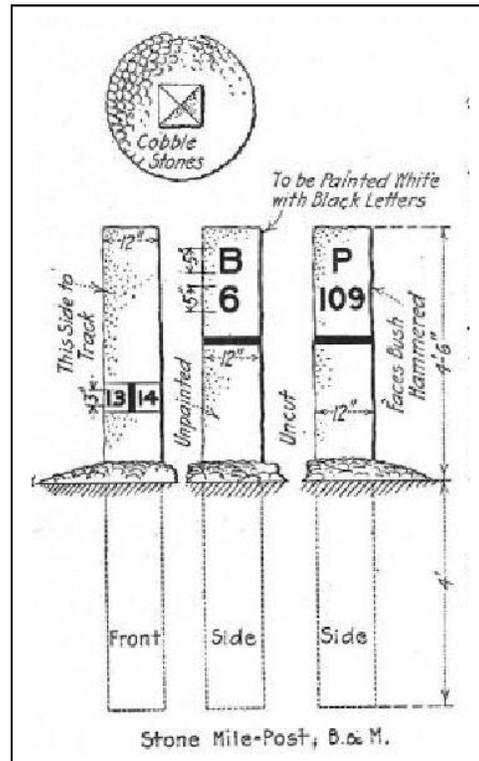
village of Boscawen, for example - we hope to negotiate with the landowners to cooperate in furthering the historical integrity of the Trail.

Since the termination of active maintenance of the right-of-way, the markings on the posts have faded, many almost beyond recognition. A project of restoration was undertaken, utilizing the historical B&M specifications for the mileposts and for the lettering fonts.

The granite mileposts are one foot square and 8½ ft. tall, extending 4½ ft. above ground (see adjacent figure). Thus each one weighs about 1,500 pounds. They are positioned as near to 15 ft. from the nearest rail as possible, and placed on the right side of the track as seen going outbound from Boston.

The panels for the lettering on each side are *bush hammered*. [This is a surface preparation by hammering with a heavy tool having a head of conical or pyramidal points that creates a smooth texture that resembles naturally weathered rock. This hammer was invented by the French sculptor Henri Bouchard (1875-1960), hence the name “bush”].

The B&M Standard Plans defined the font for the mileposts. The letters are 5 in. tall, 3.75 in. wide (most characters), and stroke width of 5/8 in. (See Appendix B).



Alan LePain, mechanical designer and computer aided design expert, has worked extensively with the B&M RR Historical Society on restoration of mileposts on the Boston-Northampton line in Massachusetts. He computerized this historic B&M font, and supplied us with a full set of computerized scale drawings, from which stencils were cut on Mylar sheets. These include the full set of numbers, plus the “B” and the “WRJ”. [Appendix C]

The restoration of the painting on the mileposts consisted of a number of separate steps.

1. Clearing of brush around the post
2. Cleaning of the surfaces using a wire brush
3. Applying a coat of white paint to each face
4. Positioning the “B” and the “WRJ” stencils and painting with black paint
5. Positioning the number stencils and painting with black paint
5. Taping the 3 inch borders at the bottom and painting with black paint
6. Touching up of unavoidable bleeding of paint under the stencil with white paint

The total time on site per post to accomplish these steps was 3½ to 4 hours. In addition, three separate round-trip visits to the milepost site were required to allow for paint drying time. By working alternately on two posts, the travel time was minimized.

The paints that we found suitable are:

Black: Benjamin Moore N09680 exterior acrylic latex

White: Benjamin Moore N10301 exterior acrylic latex

Use of water-based paints allows easier clean-up in the field, and appears to provide long lasting paint coverage.

A photo montage of some of the restored posts is included in Appendix D. Mileposts B-74 through B-79 are on Pan Am railroad property in Concord, and have not been painted.

The photo below gives some idea of the care that has been taken in restoring these historic monuments.





Northern Line – Concord to White River Junction

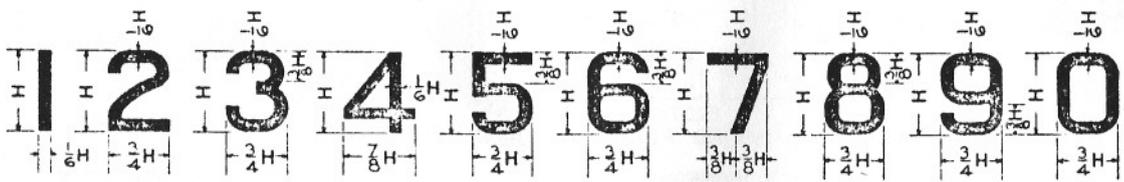
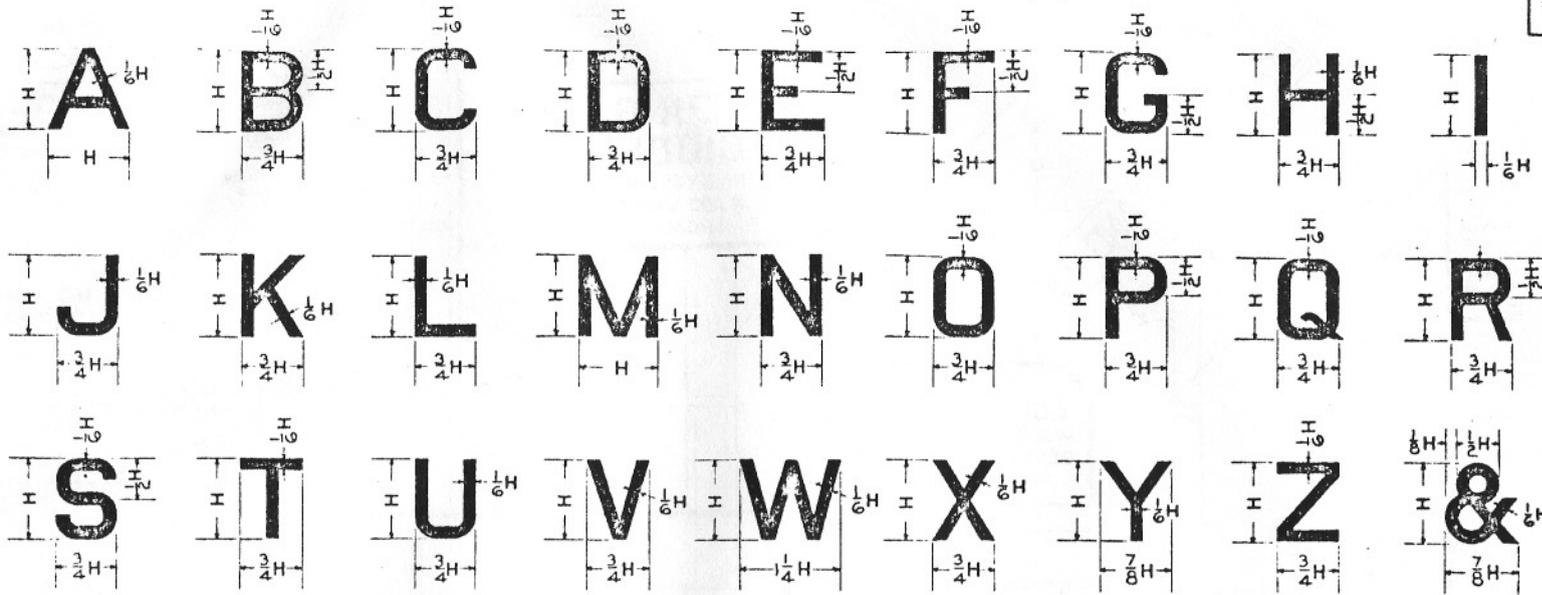
Appendix A - Northern Railroad Milepost Survey

Milepost	Location	found?	Latitude	Longitude
142.930	WHITE RIVER JUNCTION STATION			
142.667	CONNECTICUT RIVER		43 38 49.5	72 18 50.6
B142/WRJ01	above Lake Sunapee Bank on S. Main St. w. graffiti	√	43 38 18.9	72 18 49.3
B141/WRJ02	near Glen Rd. [Section 211/290 marker found]	√	43 38 04.3	72 17 54.7
B140/WRJ03	140 ft E of Mascoma river bridge	missing	43 38 26.6	72 16 50.9
B139/WRJ04	above Mechanic St., by Jakes Mkt. (w. "C66" visible)	√	43 38 18.8	72 15 41.8
138.660	Trail head at Mechanic St.	kiosk	43 38 29.3	72 15 20.5
138.270	Trail head at Spencer St.	kiosk	43 38 40.4	72 14 58.5
B138/WRJ05	1/4 mi E of trail-head at Spencer St. [donated by Guy Plume, Lebanon]	restored	43 38 42.7	72 14 39.6
B137/WRJ06	61 ft E of E abutment of Mascoma River bridge 137.03	replaced	43 38 20.3	72 13 36.8
B136/WRJ07	101 ft E of farm crossing	replaced	43 38 18.9	72 12 25.9
B135/WRJ08	28 ft E of abutment of bridge 135.01	replaced	43 38 40.2	72 11 24.0
B134/WRJ09	86 ft E of stone bometal culvert	replaced	43 38 54.3	72 10 27.7
133.745	ENFIELD-LEBANON TOWN LINE	post	43 38 50.3	72 10 09.1
B133/WRJ10	422 ft E of culvert 133.08	replaced	43 38 21.7	72 09 42.3
B132/WRJ11	50 ft W of Mascoma River bridge	replaced	43 38 25.3	72 08 56.2
B131/WRJ12	444 ft W of roadway	replaced	43 38 28.7	72 07 47.1
130.177	CANAAN-ENFIELD TOWN LINE	post	43 38 34.7	72 06 49.5
B130/WRJ13	600 ft E of Mascoma River bridge 130.12	replaced	43 38 38.2	72 06 37.4
B129/WRJ14	0.25 mi E of South Rd.	replaced	43 38 58.2	72 05 31.2
B128/WRJ15	300 ft W of Mascoma River bridge 127.95 [Section 210/211]	replaced	43 38 54.7	72 04 23.3
B127/WRJ16	0.2 mi W of Potato Rd	replaced	43 38 45.4	72 03 11.6
B126/WRJ17	0.16 mi W of Indian River bridge	replaced	43 38 46.2	72 01 59.8
B125/WRJ18	500 ft W of Canaan Freight House	√	43 38 43.4	72 00 49.9
B124/WRJ19	280 ft N of town line marker, 205 ft N of culvert 123.96	replaced	43 38 14.7	71 59 53.3
123.947	ORANGE-CANAAN TOWN LINE	post	43 38 13.5	71 59 51.3
B123/WRJ20	0.3 mi S of Rte 4 overpass (tunnel) by Rte. 4	replaced	43 37 52.9	71 58 49.6
122.209	GRAFTON-ORANGE TOWN LINE (est)	post	43 37 18.8	71 58 30.0
B122/WRJ21	190 ft N of culvert 121.85, 1,026 ft S of T/L	metal	43 37 07.4	71 58 26.0
B121/WRJ22	0.2 mi N of Rte 4 overpass (tunnel)	metal	43 36 21.8	71 57 54.7
B120/WRJ23	0.4 mi N of Bullock's Crossing Rd	metal	43 35 33.0	71 58 11.8

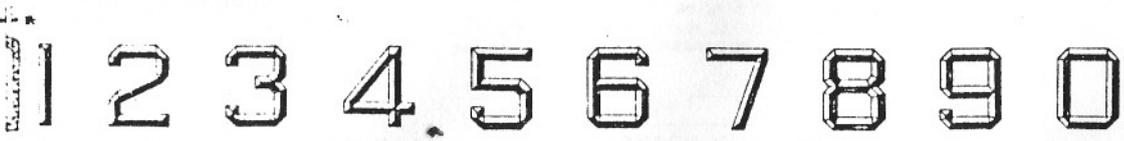
B119/WRJ24	500 ft N of Grafton Center, by Grafton Center Cemetery	metal	43	34	44.2	71	58	31.5
B118/WRJ25	0.8 mi W of Prescott Hill Rd.	metal	43	34	04.6	71	57	49.6
B117/WRJ26	500 ft W of Grafton Station	metal	43	33	34.7	71	56	51.3
B116/WRJ27	850 ft E of Sargent Hill Rd	metal	43	33	37.9	71	55	41.2
B115/WRJ28	0.61 mi N of Zaccaria Rd, 553 ft N of TL post [Section 206/210 marker found]	√	43	33	34.0	71	54	30.1
114.895	DANBURY-GRAFTON TOWN LINE	post	43	33	31.4	71	54	25.2
B114/WRJ29	0.2 mi N of Ford Mill Rd	√	43	32	58.9	71	53	36.6
B113/WRJ30	0.8 mi S of Ford Mill Rd	√	43	32	14.6	71	53	02.5
B112/WRJ31	1500 ft S of High St, 0.5 mi N of Danbury Ctr	√	43	31	44.2	71	52	07.1
B111/WRJ32	1000 ft S of Rte 4 overpass, near Spear Hill Rd	√	43	31	01.1	71	51	54.9
B110/WRJ33	900 ft E of Rte 4 overpass, near Juniper Meadow Rd (sits on stone platform)	√	43	30	15.7	71	52	24.5
B109/WRJ34	900 ft N of Roy Ford Rd underpass (sits on stone platform)	√	43	29	35.0	71	52	58.3
B108/WRJ35	500 ft S of South Danbury Cemetery	√	43	28	44.6	71	53	14.3
107.364	WILMOT-DANBURY TOWN LINE	post	43	28	12.5	71	53	09.7
B107/WRJ36	500 ft N of Eagle Pond Cemetery (visible from Rte 4)	√	43	27	54.0	71	53	02.1
106.168	ANDOVER-WILMOT TOWN LINE	post	43	27	11.3	71	52	52.0
B106/WRJ37	0.21 mi S of Eagle Pond Rd	√	43	27	02.8	71	52	50.7
B105/WRJ38	0.46 mi N of Rte 11 overpass (behind #241 Depot St)	√	43	26	26.8	71	52	03.8
B104/WRJ39	Behind Lenny Caron gravel pit, off Depot St	√	43	26	09.7	71	50	58.2
B103/WRJ40	0.33 mi E of Bridge Rd	√	43	26	02.7	71	49	47.6
B102/WRJ41	0.27 mi W of Blackwater River bridge near N. Short St [Section 204/206 marker not found]	√	43	26	04.0	71	48	36.5
B101/WRJ42	50 ft W of Mountain Brook bridge	√	43	26	14.2	71	47	26.5
B100/WRJ43	750 ft W of Plains Rd	√	43	26	31.5	71	46	19.3
B99/WRJ44	100 ft W of Icehouse Lane	√	43	26	57.2	71	45	17.9
B98/WRJ45	800 ft E of Maple St	√	43	27	42.6	71	44	50.9
B97/WRJ46	0.25 mi W of Sam Hill Rd	√	43	28	25.1	71	44	20.5
B96/WRJ47	0.23 mi E of Dyers Crossing Rd	√	43	28	12.1	71	43	14.9
95.084	FRANKLIN-ANDOVER TOWN LINE	post	43	27	58.6	71	42	13.2
B95/WRJ48	500 ft W of Marston Hill Rd	√	43	27	57.5	71	42	07.5
B94/WRJ49	800 ft W of Chance Pond Rd	√	43	27	37.5	71	41	01.6
B93/WRJ50	0.3 mi S of Carr St	√	43	27	02.4	71	40	09.7
B92/WRJ51	185 ft N of Depot St underpass, at Franklin Depot	√	43	26	18.2	71	39	32.2
B91/WRJ52	0.1 mi S of Rte 3 overpass	√	43	25	30.8	71	39	09.7
B90/WRJ53	75 ft N of Punch Brook bridge	√	43	24	41.4	71	39	23.5

B89/WRJ54	0.5 mi S of Webster Place [Section 202/204 marker found]	√	43 23 56.3	71 38 51.4
B88/WRJ55	275 ft N of town line	replaced	43 23 10.1	71 38 55.7
87.948	BOSCAWEN-FRANKLIN TOWN LINE	post	43 23 05.4	71 38 58.3
B87/WRJ56	0.4 mi N of Gerrish Station (original was broken off, replaced)	replaced	43 22 17.6	71 39 08.2
B86/WRJ57	500 ft.N of Glines Brook bridge	replaced	43 21 32.6	71 38 34.7
B85/WRJ58	1,000 ft S of Forest Lane	√	43 20 52.3	71 38 02.9
B84/WRJ59	behind NH Veterans Cemetery [donated by Cindy Richardson, Boscawen]	restored	43 20 00.9	71 37 50.5
B83/WRJ60	2,000 ft N of Depot St	metal	43 19 13.0	71 37 26.1
B82/WRJ61	300 ft N of Jones' Pond bridge	metal	43 18 34.5	71 36 39.7
B81/WRJ62	0.28 mi N of farm crossing [donated by Dane Malcolm, Hopkinton]	restored	43 17 52.3	71 35 57.6
80.680	NH-DOT end approx. 128 ft S of farm crossing	no mark	43 17 38.9	71 35 44.1
80.064	CONCORD-BOSCAWEN TOWN LINE (S. bank Contoocook River)	no mark	43 17 12.1	71 35 24.0
B80/WRJ63	#52 203 ft S of Contoocook River bridge, by Penacook freight house	missing	43 17 07.2	71 35 21.3
B79/WRJ64	#51 middle of causeway, 0.7 mi N of Sewall's Falls Rd.	√	43 16 29.2	71 34 35.5
B78/WRJ65	#50 0.63 mi N of Second St.	√	43 15 55.2	71 33 41.6
B77/WRJ66	#49 0.37 mi S of Second St	√	43 15 04.3	71 33 37.5
B76/WRJ67	#48 opposite NH State Prison	√	43 14 13.9	71 33 35.7
B75/WRJ68	#47 opposite Calvary Cemetery	√	43 13 29.8	71 32 59.9
B74/WRJ69	#46 behind N end of Concord Center bldg, non-standard post	√	43 12 50.2	71 32 18.4
73.415	CONCORD yard limit (survey 0+00)		43 12 22.1	71 31 58.8
73.33	CONCORD STATION		43 12 17.4	71 31 56.1

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NOTE
WHEN NECESSARY TO USE A CONDENSED FORM OF LETTER, THE HORIZONTAL DIMENSIONS, EXCEPT THE THICKNESS OF THE BODY OF THE LETTER, SHALL BE TWO THIRDS OF THAT SHOWN.



* NOTE - DEPTH OF PATTERNS FOR 1-2 LETTERS - 1/2 H
 DEPTH OF PATTERNS FOR 3-5 LETTERS - 3/4 H
 DEPTH OF PATTERNS FOR 6-7-8 LETTERS - 3/8 H

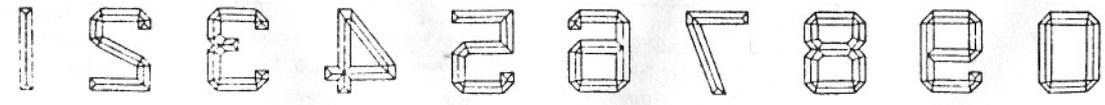
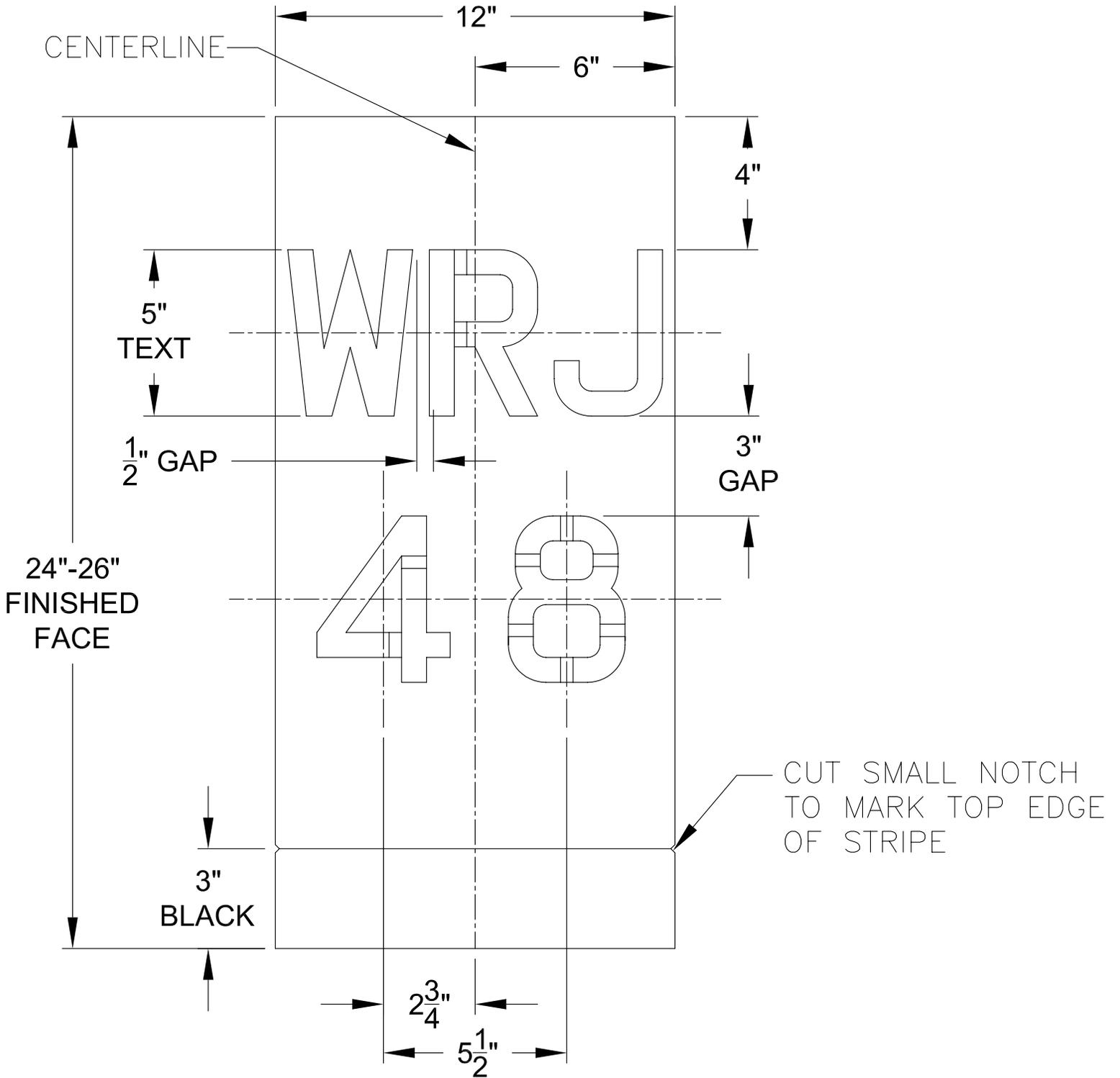


FIGURE PATTERNS FOR CONCRETE POSTS

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 STANDARD
 LETTERS AND FIGURES
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A. J. ...
 CHIEF ENGINEER



TYPICAL STENCIL
 TEMPLATE DIMENSIONS
 FOR 5 INCH TEXT

